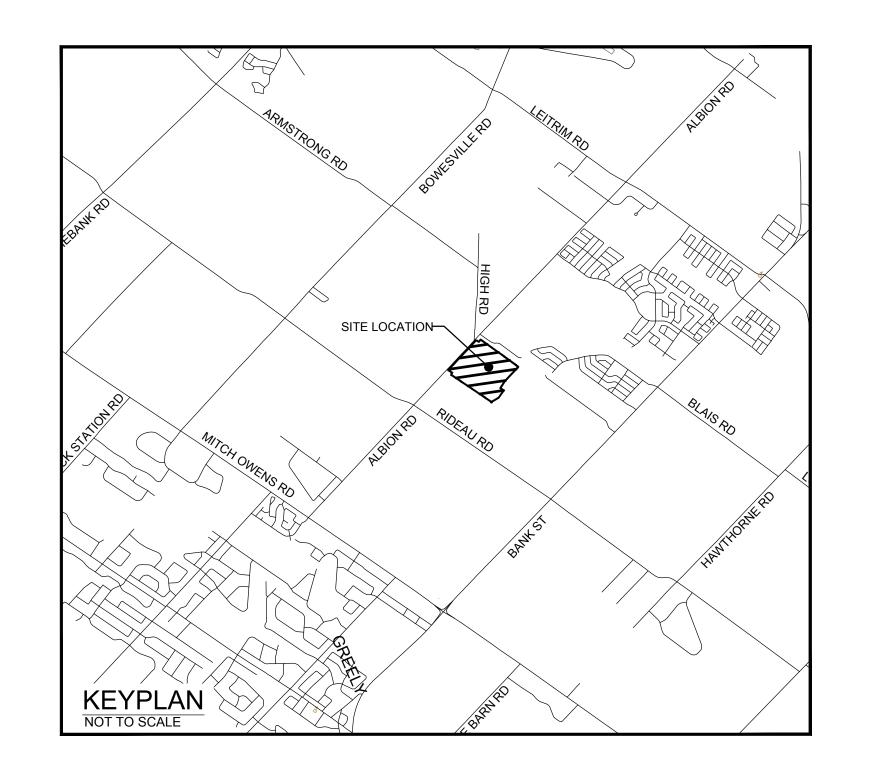
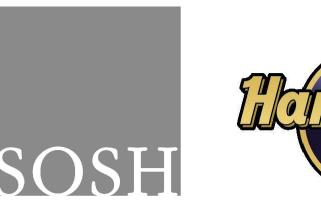
# HARD ROCK OTTAWA

# 4837 ALBION ROAD, CITY OF OTTAWA ROADS, SEWERS AND WATERMAINS









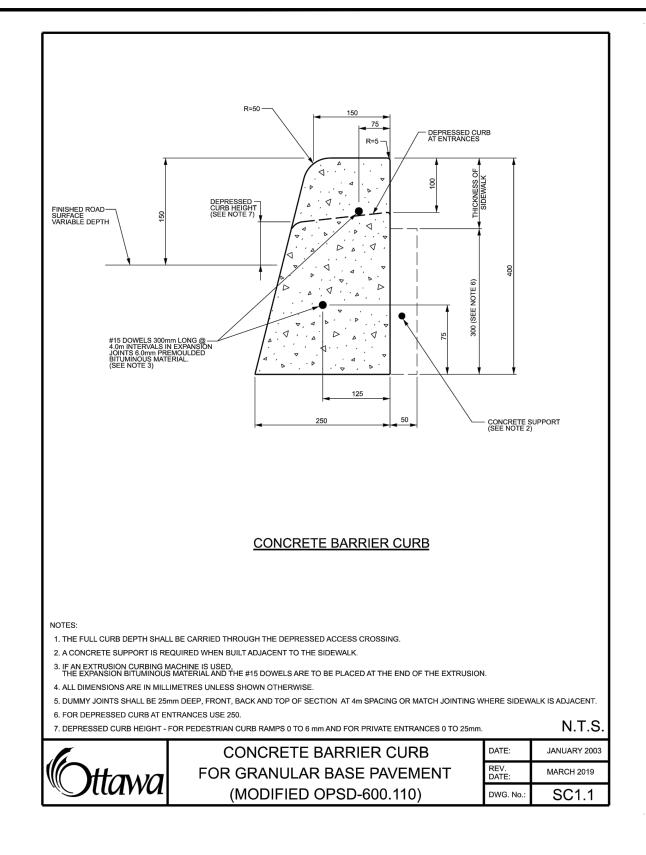


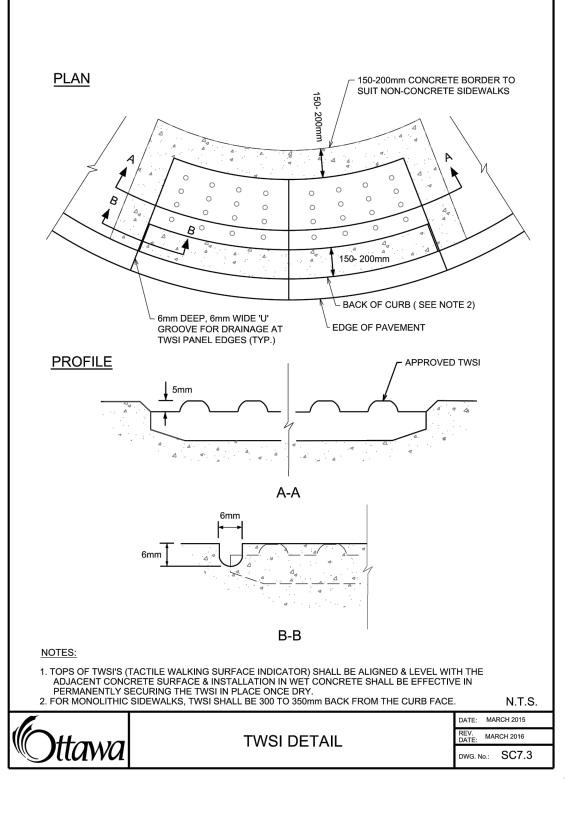


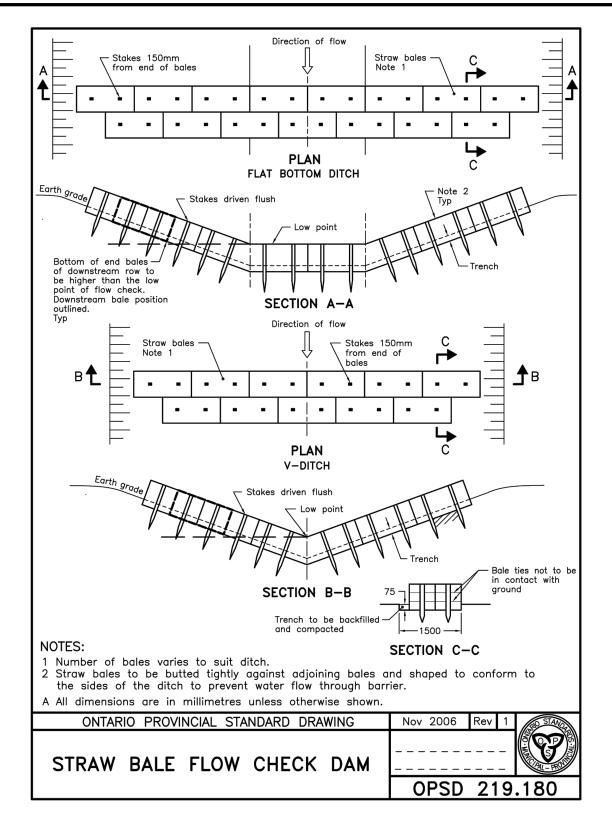
PROJECT No. 116111

REVISED PER CITY COMMENTS

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**ROOF DRAIN TABLE:** 

WATTS ACCUTROL RD-100-A-ADJ

**ROOF DRAIN TABLE** 

ROOD DRAIN

ID

RD-32

RD-33A/B

R-12b RD-45 - RD-47 OPEN

R-13 RD-48 OPEN R-14 RD-49 OPEN

R-4 RD-15 - RD-16

R-6a RD-20 - RD-23

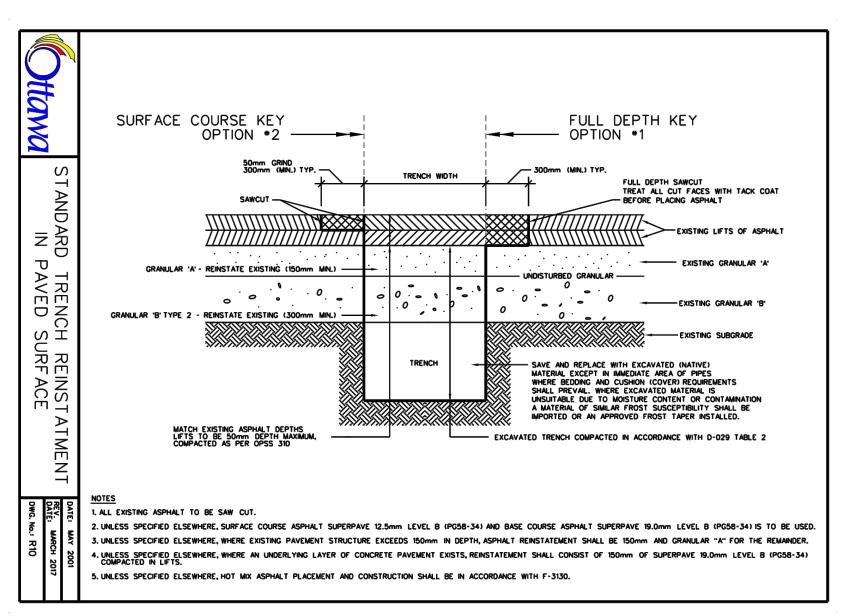
R-6b RD-24 - RD-28

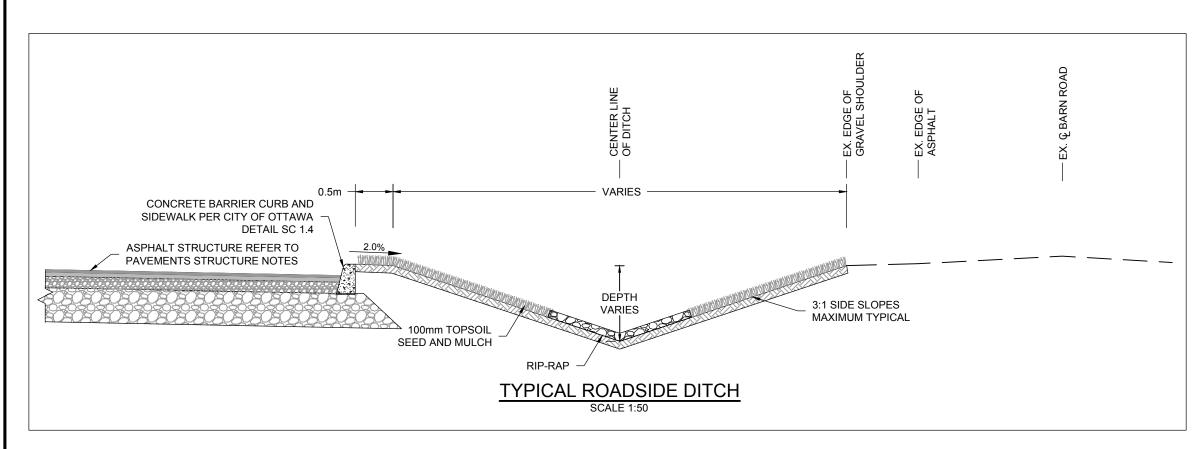
R-12a RD-42 - RD-44

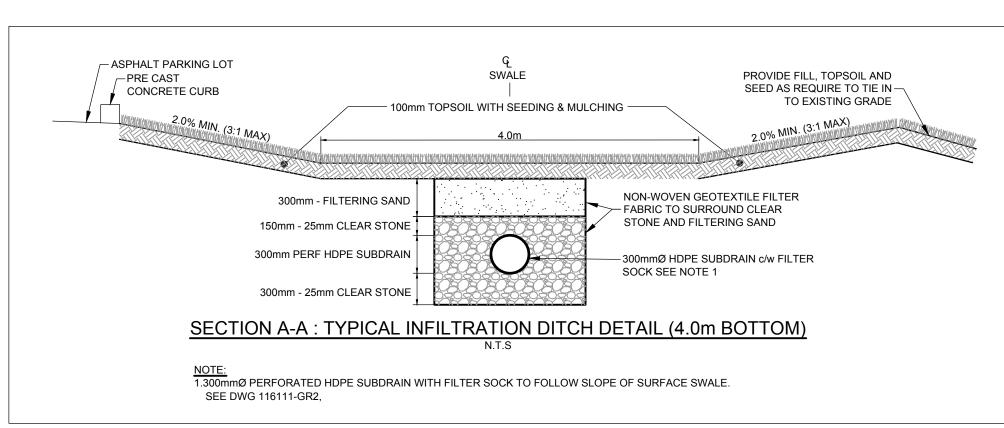
SETTING

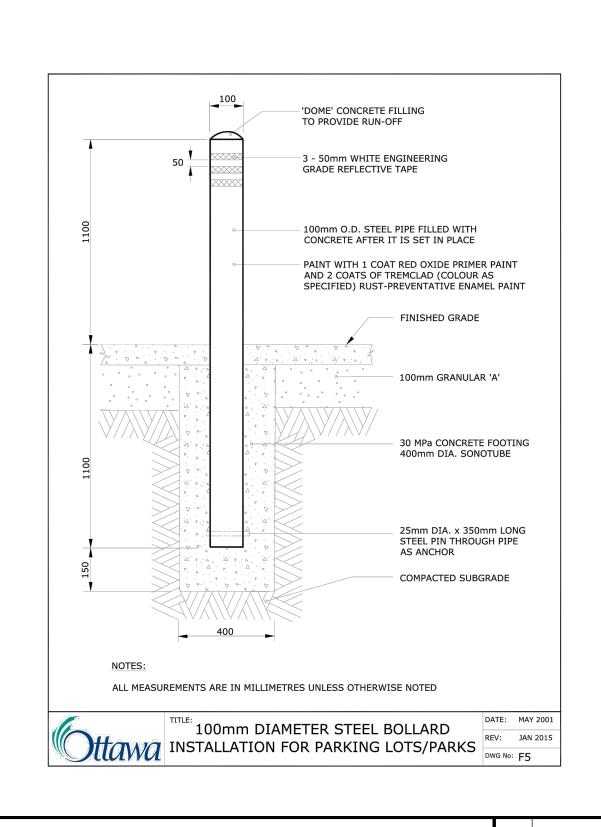
ROOF AREA

## PERSPECTIVE VIEW Direction of flow backfilled and Original ground JOINT DETAIL SECTION A-A ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 2 A All dimensions are in millimetres unless otherwise shown. LIGHT-DUTY SILT FENCE BARRIER









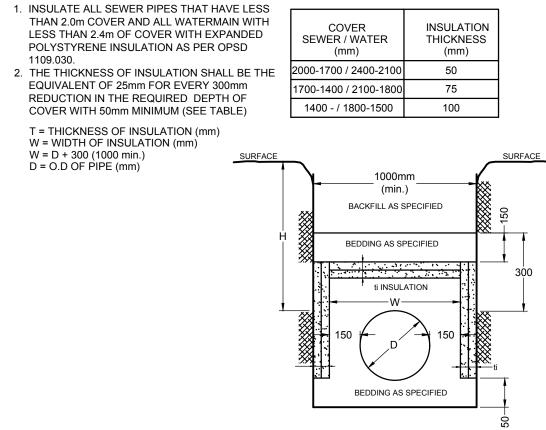
#### INLET CONTROL DEVICE TABLE:

OPSD 219.110

СВ / СВМН	IPEX ICD Type	Outlet Pipe Dia.	Structure Dia.	100-year Model Results			
ID	(model)	(mm)	(mm)	Release Rate (L/s)	Head (m)		
EX-CB117	HF-77	250	600x600	14.08	1.44		
EX-CB134	HF-85	200	600x600	19.43	1.81		
EX-CB137	HF-137	200	600x600	47.28	1.58		
EX-CB14	HF-130	200	600x600	57.55	2.89		
EX-CB60	HF-110	250	600x600	31.55	1.69		
EX-CB64	LMF-100	250	600x600	11.04	1.56		
EX-CB72	LMF-100	200	600x600	11.58	1.7		
EX-CB82	HF-202	200	600x600	96.31	1.39		
EX-CB84	HF-118	200	600x600	35.5	1.66		
EX-MH105	HF-199	450	1200	122.26	2.39		
EX-MH112	HF-218	300	1200	116.78	1.5		
PR-CB13	LMF-85	250	600x600	8.01	1.58		
PR-CB14	LMF-85	250	600x600	7.88	1.61		
PR-CB16/17	HF-202	250	600x600	97	1.41		
PR-CB18	LMF-95	250	600x600	9.12	1.45		
PR-CB29	LMF-85	250	600x600	4.36	0.49		
PR-CB32	LMF-80	300	600x600	8.17	2.06		
PR-CB36	LMF-80	250	600x600	6.05	1.34		
PR-CB40	LMF-95	250	600x600	9.94	1.73		
PR-CB41	LMF-85	250	600x600	7.6	1.47		
PR-CBMH104	LMF-85	250	1200	7.3	1.32		
PR-CBMH105	LMF-85	250	1200	7.51	1.4		
PR-CBMH106	LMF-85	250	1200	7.52	1.4		
PR-CBMH107	LMF-85	250	1200	7.88	1.62		
PR-CBMH108	LMF-85	250	1200	7.76	1.49		
PR-CBMH109	LMF-90	300	1200	9.44	1.6		
PR-CBMH110	LMF-85	250	1200	8.47	1.79		
PR-CBMH111	LMF-105	300	1200	14.4	1.95		
PR-CBMH112	LMF-105	300	1200	14.7	2.03		
PR-CBMH114	LMF-95	300	1200	10.77	2.02		
PR-CBMH115	LMF-95	300	1200	10.47	1.94		
PR-CBMH118	HF-130	300	1200	54.22	1.64		
PR-MH100	LMF-95	450	1200	8.74	1.42		
PR-TD02	HF-130	200	300x1400	35.43	1.13		
*3-hour Chicago S	*3-hour Chicago Storm.						
*!DEV!CD! : !!							

\*IPEX ICD's sized based on 100-year model results.

#### **SEWER & WATERMAIN INSULATION NOTES:**



**INSULATION DETAIL FOR SHALLOW** 

**SEWERS & WATERMAIN** 

#### **GENERAL NOTES**

- 1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- 2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- 3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- 4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$2,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED AND THE CITY OF OTTAWA AS THIRD PARTY.
- 5. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF
- 6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS. ALL CONTAMINATED MATERIAL (IF ANY) SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- 7. ALL ELEVATIONS ARE GEODETIC. HORIZONTAL (ELLIPSOIDAL) DATUM: NAD-1983 ORIG LATITUDE: N45° 19' 15.0" LONGITUDE: W75° 37' 25.7" LOCATED 50m NORTH OF THE INTERSECTION OF ALBION ROAD AND LEITRIM ROAD, FIRST ORDER VERTICAL DATUM: CGVD2013 WITH ELEVATION OF 96.552 AND CGVD 28:78 WITH ELEVATION OF 96.853. THE SITE BENCHMARK IS THE TOP OF THE TOP LEFT BOLT ON THE TRAFFIC LIGHT ON THE NORTH SIDE OF THE MAIN ENTRANCE (ELEV. =114.05). REFER TO FARLEY, SMITH & DENIS SURVEYINGLTD. TOPOGRAPHIC PLAN OF PART OF LOTS 23 AND 24 CONCESSION 4 GEOGRAPHICAL TOWNSHIP OF GLOUCESTER, CITY OF OTTAWA).
- 8. REFER TO GEOTECHNICAL REPORT No. PG4315-2 PREPARED BY PATERSON GROUP, DATED OCTOBER 30, 2019, FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- 9. REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT No. R2019-196 DATED APRIL 24, 2020, REVISED NOVEMBER 04,2022 PREPARED BY NOVATECH.
- 11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10). ALL ROAD CUTS TO BE REINSTATED WITH FULL MILL OVERLAY AS PER CITY OF OTTAWA STANDARDS (R10).
- 12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES AND GRADING PLAN INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THE PLANS. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS, ANY
- 13. THE FIRE SUPPRESSION TANK SHOP DRAWING PROVIDED BY THE CONTRACTOR SHALL INCLUDE STRUCTURAL ENGINEERS SEAL AND PROOF OF COLLAPSE FOR VEHICLES POTENTIALLY PARKED

#### **GRADING NOTES**

ON TOP OF OF THE TANK.

1) ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS.

10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.

- 2) EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL CONSULTANT.
- 3) ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS. 4) THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED
- PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- 5) GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE
- 6) MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- 7) ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- 8) AS PER PRIVATE APPROACH BY-LAW NO. 2004-447 SECTION 26 (h) THE GRADE OF ANY PART OF A PRIVATE APPROACH TO A BUILDING MAY BE GREATER THAN 6% BUT SHALL NOT EXCEED 12% PROVIDED THAT A SUBSTANCE MELTING DEVICE SUFFICIENT TO KEEP THE PRIVATE APPROACH FREE OF ICE AT ALL TIMES IS INSTALLED AND PROPERLY MAINTAINED BY THE OWNER.

#### **EROSION AND SEDIMENT CONTROL NOTES**

ALIGNMENT CHANGES, AND ALL SURFACE ELEVATION AS BUILT GRADES.

- REFER TO ESC PLAN 116111-ESC FOR FURTHER DETAILS
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES. TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 1) THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL SUCH AS BUT NOT LIMITED TO INSTALLING FILTER CLOTHS ACROSS MANHOLE/CATCHBASIN LIDS TO PREVENT SEDIMENTS FROM ENTERING STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- 2) THE CONTRACTOR SHALL PLACE FILTER BAGS UNDER THE CATCHBASIN AND MANHOLE GRATES FOR THE DURATION OF CONSTRUCTION AND WILL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
- 3) SILT FENCING FOR ENTIRE PERIMETER OF SITE, SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
- 4) THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 5) PROVIDE MUD MATS AT ALL CONSTRUCTION ACCESS POINTS TO MINIMIZE SEDIMENT TRANSPORT OFFSITE.
- 6) EROSION AND SEDIMENT CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY.

#### **SEWER NOTES:**

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

2.	SPECIFICATIONS:		
	<u>ITEM</u>	SPEC. No.	REFERENCE
	STORM / SANITARY MANHOLE (1200Ø)	701.010	OPSD
	STORM MANHOLE (1500Ø)	701.011	OPSD
	CATCHBASIN (600x600mm)	705.010	OPSD
	CB, FRAME & COVER	400.020	OPSD
	STORM / SANITARY MH FRAME	S25	CITY OF OTTAWA
	SANITARY COVER	S24	CITY OF OTTAWA
	STORM COVER (CLOSED)	S24.1	CITY OF OTTAWA
	STORM COVER (OPEN)	S28.1	CITY OF OTTAWA
	SEWER TRENCH	S6 & S7	CITY OF OTTAWA
	STORMTECH CHAMBERS	SC-740	ADS Inc.
	STORM SEWER < 450mmØ	PVC SDR 35 (UNLESS	SPECIFIED OTHERWISE)
	STORM SEWER >= 450mmØ	CONC 65D (UNLESS S	PECIFIED OTHERWISE)
	STORM INFILTRATION CHAMBERS	SC-740	STORMTECH
	SANITARY SEWER	PVC DR 35	CITY OF OTTAWA

- 3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- 3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
- 4. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES. 5. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- 6. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- 7. STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
- 8. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
- 9. ALL CATCHBASINS AND CATCHBASIN MANHOLES ARE TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS WHICH EXTEND IN TWO DIRECTIONS LONGITUDINALLY AT THE SUBGRADE LEVEL. 10. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL
- SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. 11. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS
- 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.

#### WATERMAIN NOTES

1. SPECIFICATIONS: WATERMAIN TRENCHING THERMAL INSULATION IN SHALLOW TRENCHES WATERMAIN CROSSING BELOW SEWER

W22 PVC DR 18

CITY OF OTTAWA CITY OF OTTAWA

- 2. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
- 3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- 4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

#### PAVEMENT STRUCTURE

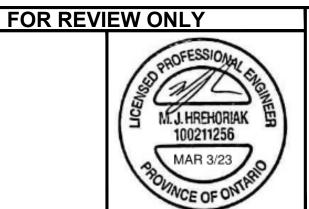


300mm OPSS GRANULAR "B" TYPE II

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR

DAMAGE TO THEM.

				SCALE	BEGIOIV	
					MJH	
				10110755	CHECKED	
5	REVISED PER CITY COMMENTS	MAR 03/23	MJH	AS NOTED	CJR	
4	DESIGN DOCUMENTS PACKAGE	NOV 15/22	МЈН		DRAWN	
3	REVISED PER CITY COMMENTS	NOV 08/22	МЈН		MJR	-
2	REVISED PER CITY COMMENTS	APRIL 24/20	CJR		CJR	,
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR		APPROVED	-
No.	REVISION	DATE	BY		JLS	;





4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA

DRAWING NAME NOTES AND DETAILS **GENERAL** 

REV # 5 116111-ND1

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#### STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH SC-740 OR SC-310.
- 2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 4 THE STRUCTURAL DESIGN OF THE CHAMBERS THE STRUCTURAL BACKELL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE
- CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
- A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
- b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
- c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- 8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

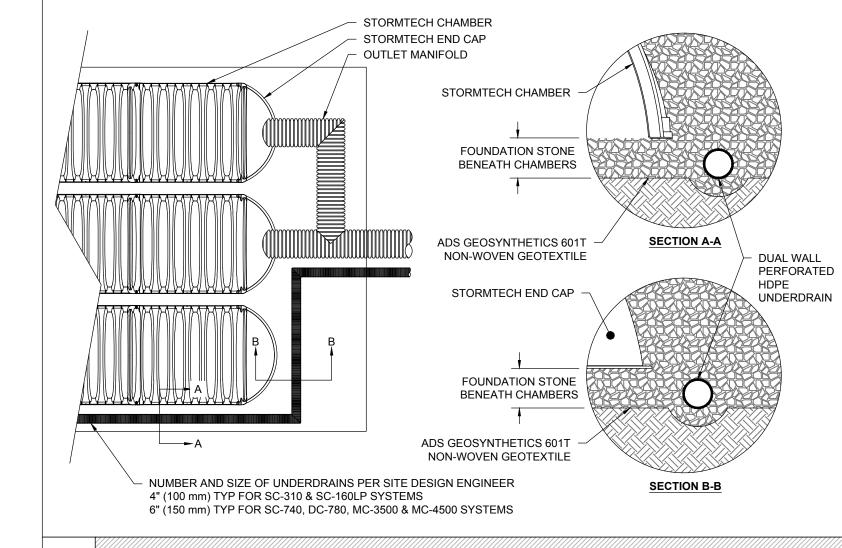
#### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

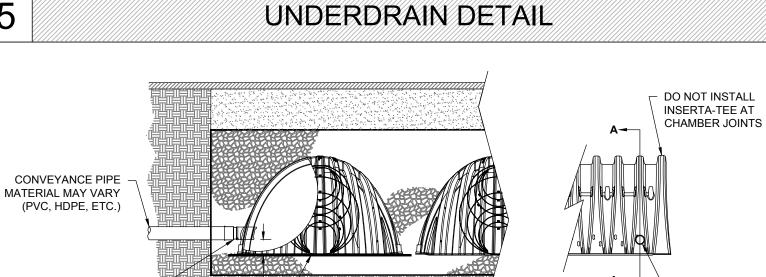
- 1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONESHOOTER LOCATED OFF THE CHAMBER BED. BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE. BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE
- 9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

#### NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS. • NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN
- ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE". WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR





PLACE ADS GEOSYNTHETICS 315 W GEOTEXTILE (CENTERED ON INSERT INLET) OVER BEDDING STONE FOR S PROTECTION AT SIDE INLET CONNECT GEOTEXTILE MUST EXTEND 6" (15	A-TEE COUR FIONS. 50 mm)	SECTION A-A	INSERTA TEE INSTALLED, CEN OVER CORRUE SIDE 1	ITERED GATION
PAST CHAMBER	FOOT	CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE CHAMBER (X)
		SC-310	6" (150 mm)	4" (100 mm)
		SC-740	10" (250 mm)	4" (100 mm)
		DC-780	10" (250 mm)	4" (100 mm)
		MC-3500	12" (300 mm)	6" (150 mm)

SC740EPE10T / SC740EPE10TPC 10" (250 mm) 13.4" (340 mm) 0.7" (18 mm) SC740EPE10B / SC740EPE10BPC 12.5" (318 mm) SC740EPE12T / SC740EPE12TPC 12" (300 mm) 14.7" (373 mm) 1.2" (30 mm) SC740EPE12B / SC740EPE12BPC 9.0" (229 mm) SC740EPE15T / SC740EPE15TPC 15" (375 mm) 18.4" (467 mm) 1.3" (33 mm) SC740EPE15B / SC740EPE15BPC SC740EPE18T / SC740EPE18TPC 18" (450 mm) 19.7" (500 mm) 1.6" (41 mm) SC740EPE18B / SC740EPE18BPC 24" (600 mm) 18.5" (470 mm) 0.1" (3 mm) SC740EPE24B\* ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT

10.9" (277 mm)

12.2" (310 mm)

90.7" (2304 mm) ACTUAL LENGTH ----

**NOMINAL CHAMBER SPECIFICATIONS** 

PRE-CORED END CAPS END WITH "PC"

PART#

SC740EPE06T / SC740EPE06TPC

SC740EPE06B / SC740EPE06BPC

SC740EPE08T /SC740EPE08TPC

SC740EPE08B / SC740EPE08BPC

SIZE (W X H X INSTALLED LENGTH

MINIMUM INSTALLED STORAGE\*

CHAMBER STORAGE

(310 mm)

\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL. NOTE: ALL DIMENSIONS ARE NOMINAL

CONTACT STORMTECH FOR MORE INFORMATION.

PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS.

INSERTA TEE

CONNECTION

### INSERTA-TEE SIDE INLET DETAIL

### SC-740 TECHNICAL SPECIFICATIONS

51.0" X 30.0" X 85.4" (1295 mm X 762 mm X 2169 mm)

(1.30 m<sup>3</sup>)

(2.12 m<sup>3</sup>)

(33.6 kg)

18.5" (470 mm)

16.5" (419 mm)

14.5" (368 mm)

0.5" (13 mm)

0.6" (15 mm)

45.9 CUBIC FEET

74.9 CUBIC FEET

75.0 lbs.

\*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

8" (200 mm)

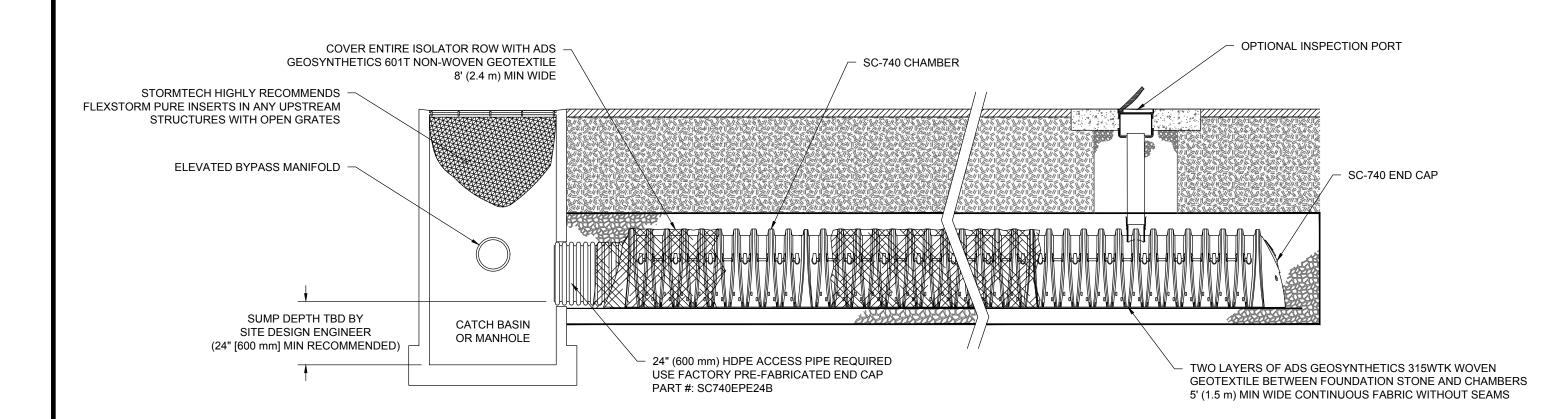
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

85.4" (2169 mm) INSTALLED LENGTH -

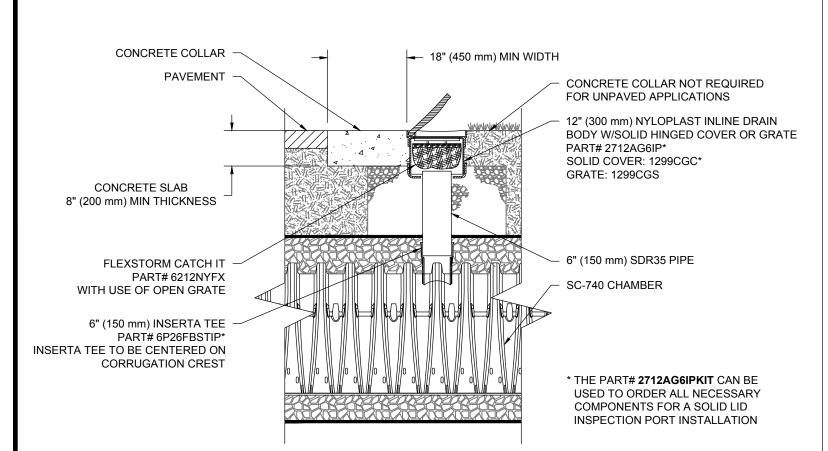
< ⇒ BUILD ROW IN THIS DIRECTION

OVERLAP NEXT CHAMBER HERE

(OVER SMALL CORRUGATION)



#### SC-740 ISOLATOR ROW DETAIL



SC-740 6" (150 mm) INSPECTION PORT DETAIL

#### **INSPECTION & MAINTENANCE**

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. B. ALL ISOLATOR ROWS B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY i) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

### STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

- 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

#### ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

8" (200 mm)

12" (300 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS

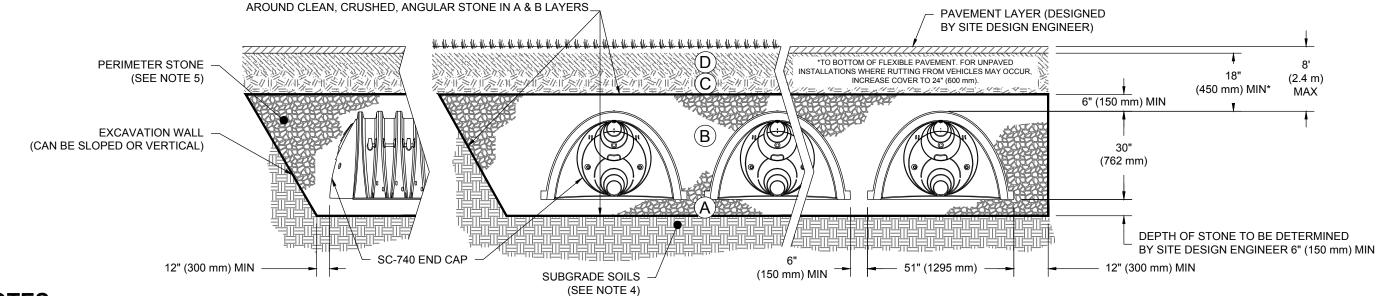
GASKETED & SOLVENT WELD. N-12. HP STORM. C-900 OR DUCTILE IRON

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	OR	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
Α	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

PLEASE NOTE: 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED,

STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL



#### NOTES:

- 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- 2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION
- 3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL
- 4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE
- WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- 5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

DATE BY

REVISION

6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

SC-740 CROSS SECTION DETAIL

FOR REVIEW ONLY SCALE AS NOTED REVISED PER CITY COMMENTS APRIL 24/20 C ISSUED FOR SITE PLAN APPROVAL NOV 20/19 CJ



Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6 Facsimile Website www.novatech-eng.com

LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA

> NOTES AND DETAILS STORMTECH CHAMBERS

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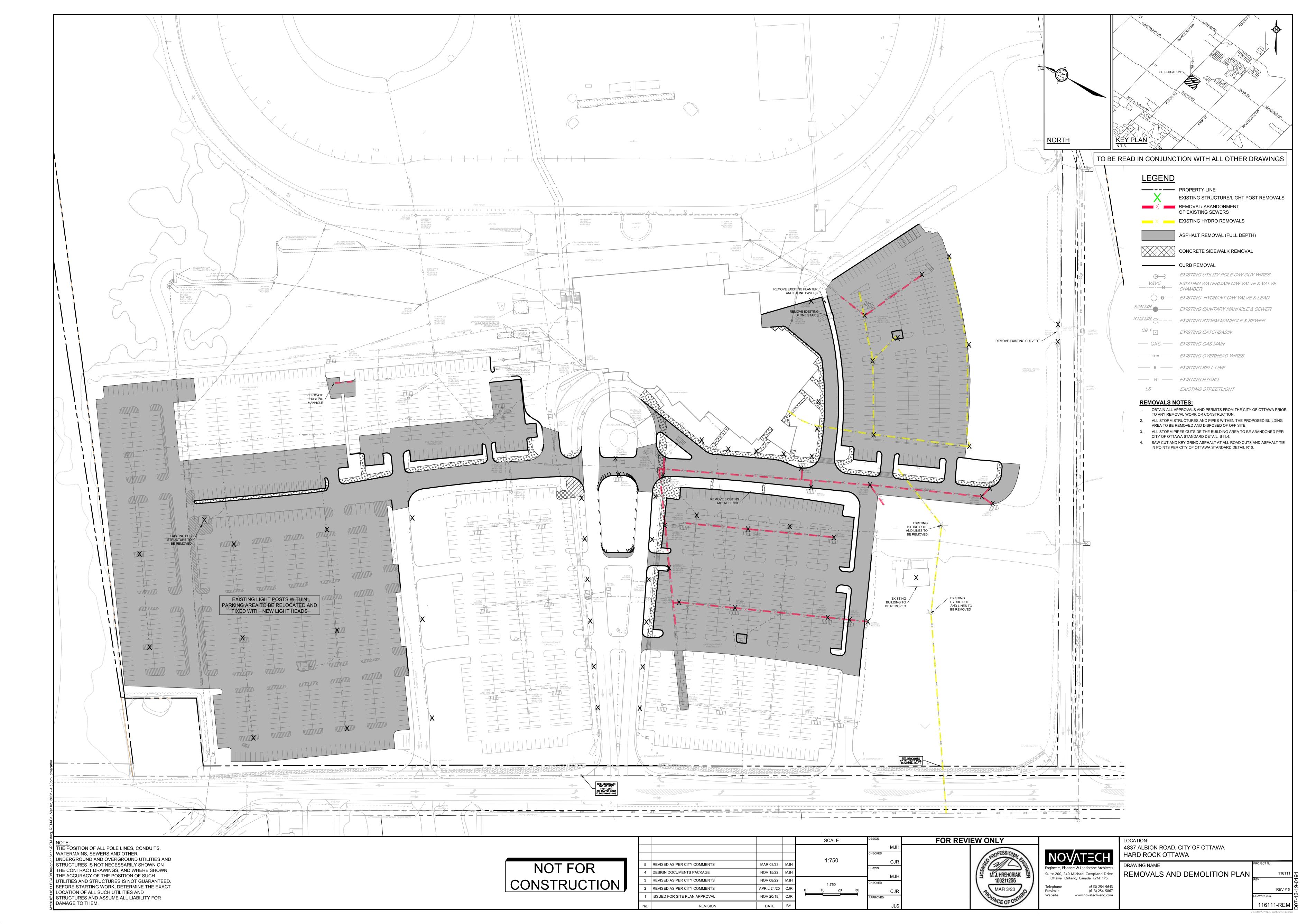
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

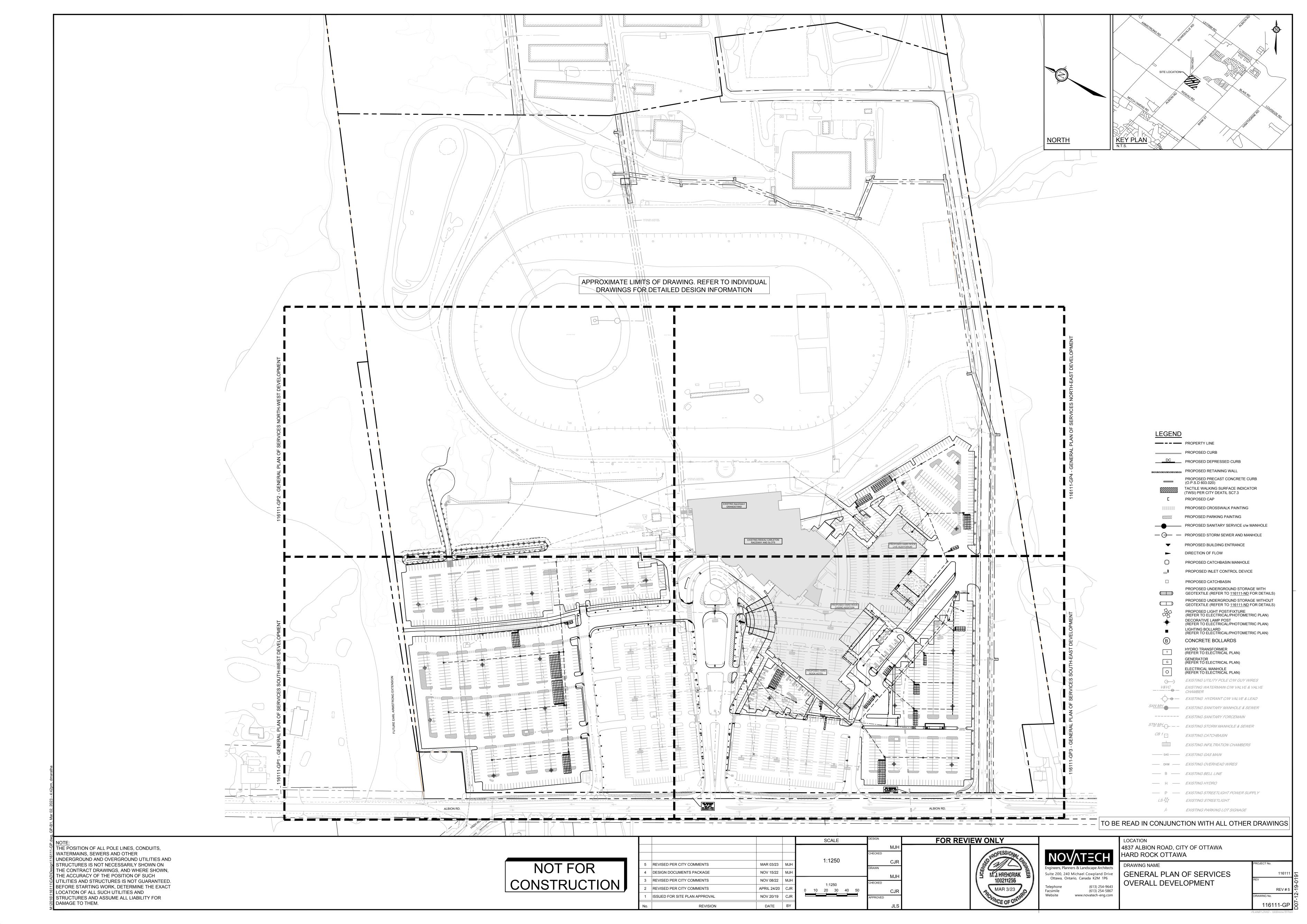
DRAWING NAME (613) 254-9643 (613) 254-5867

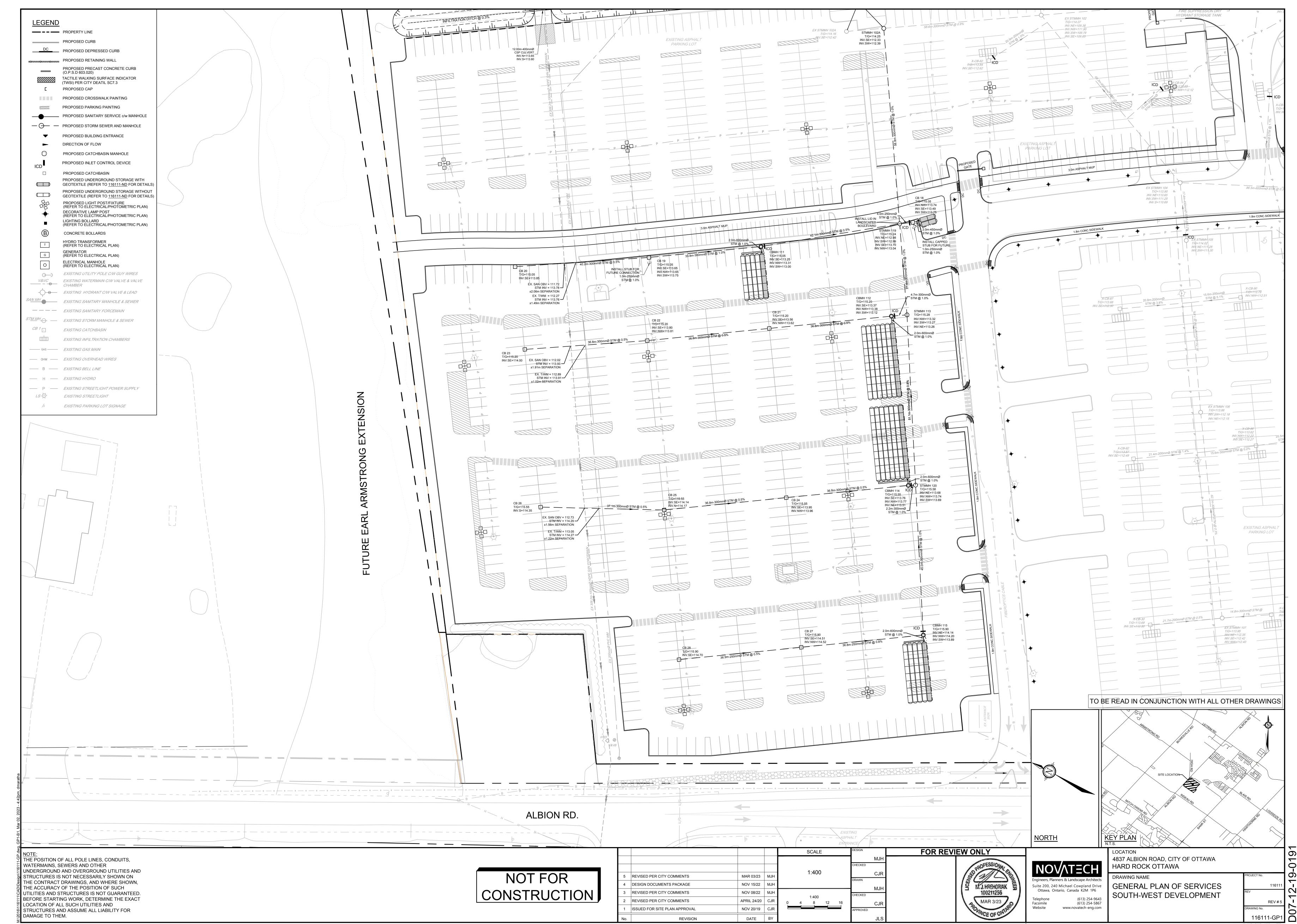
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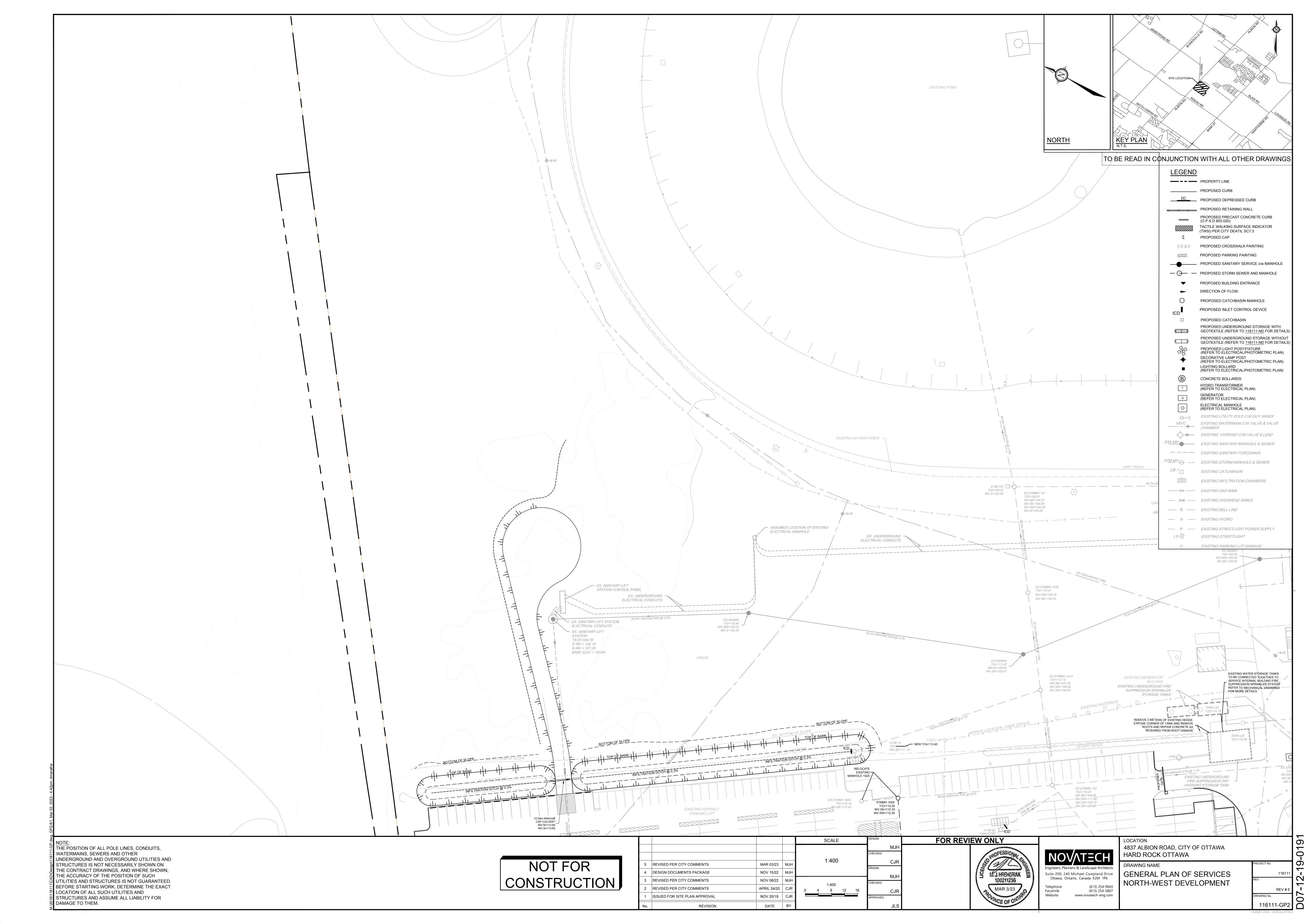
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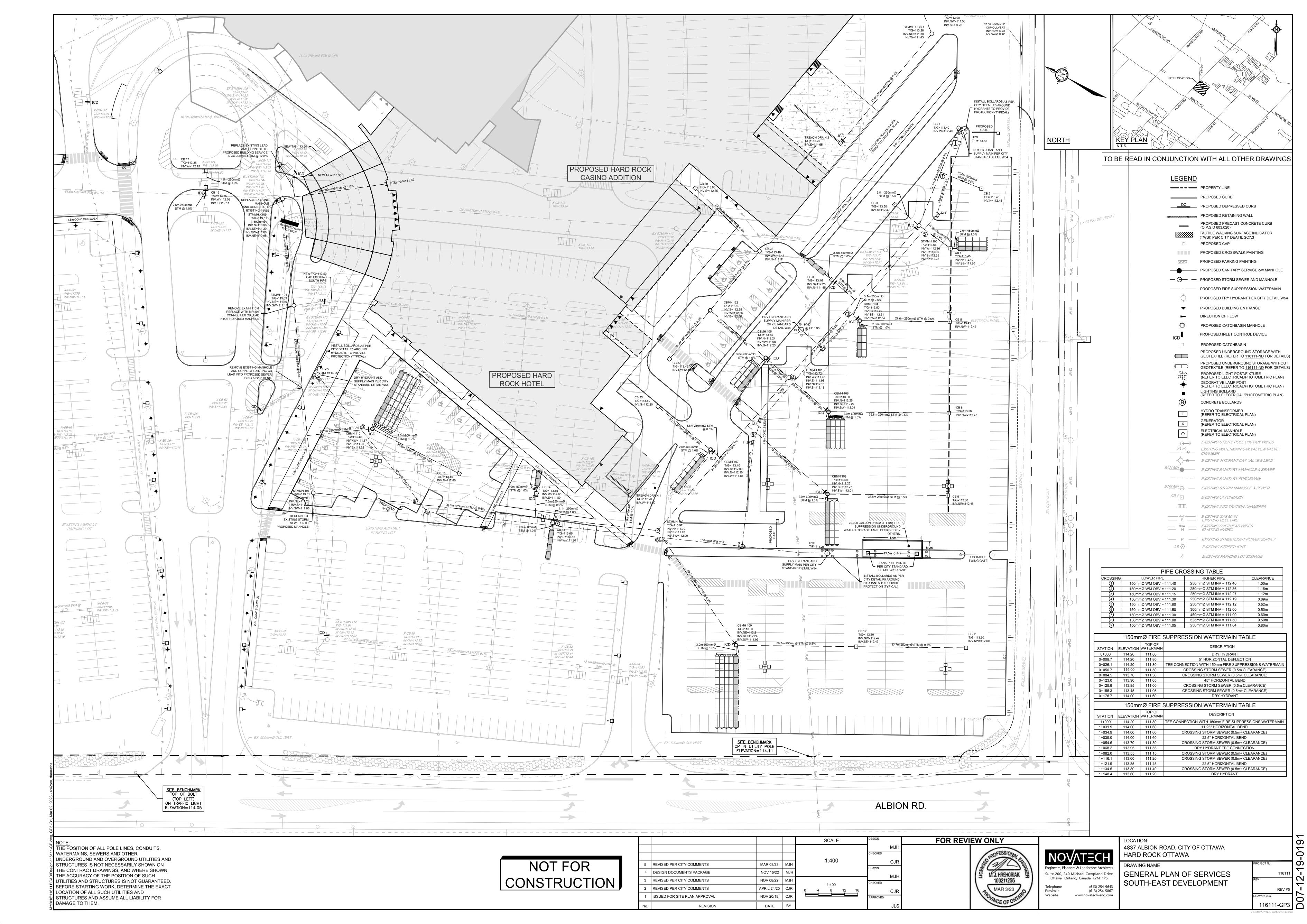
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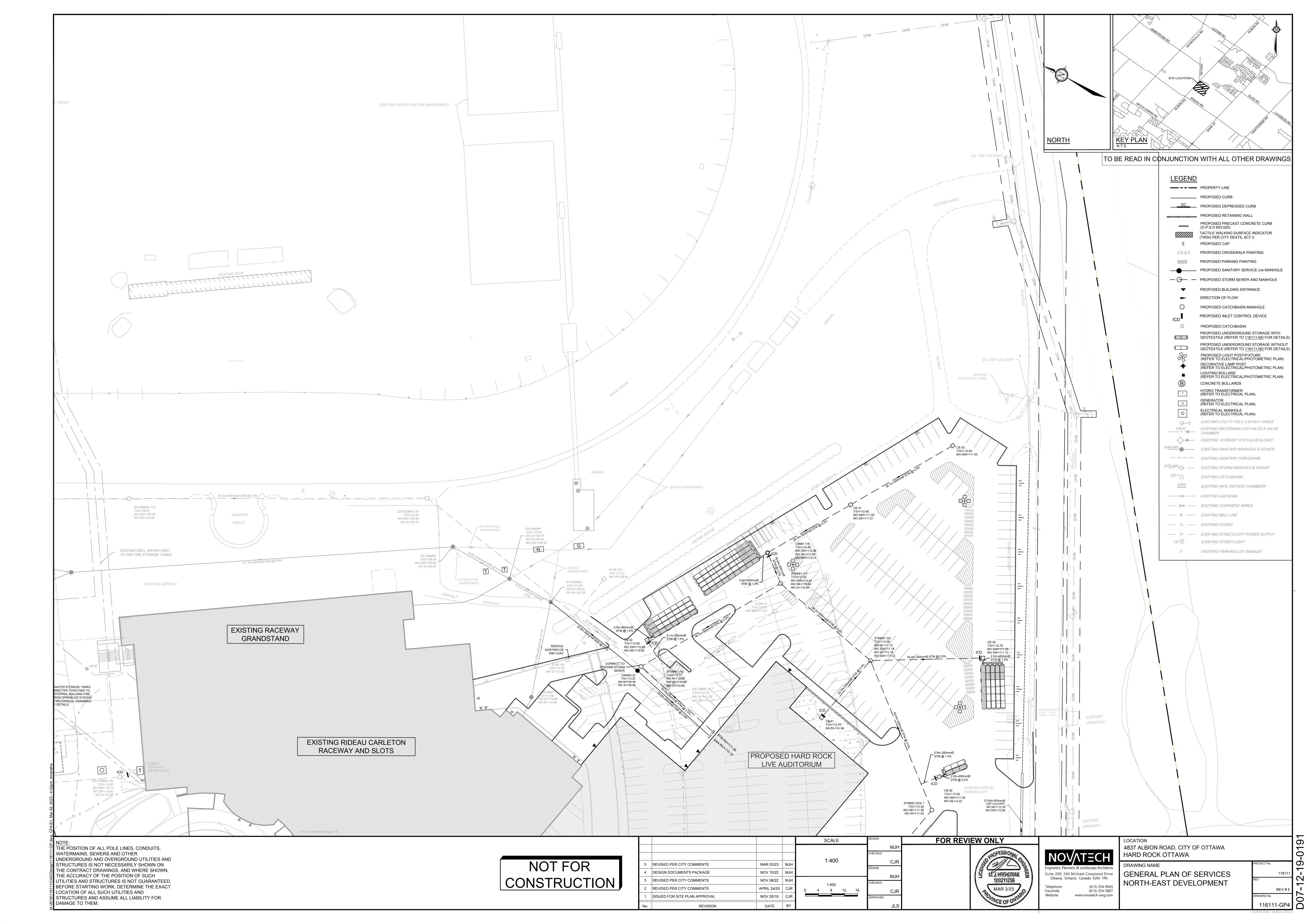


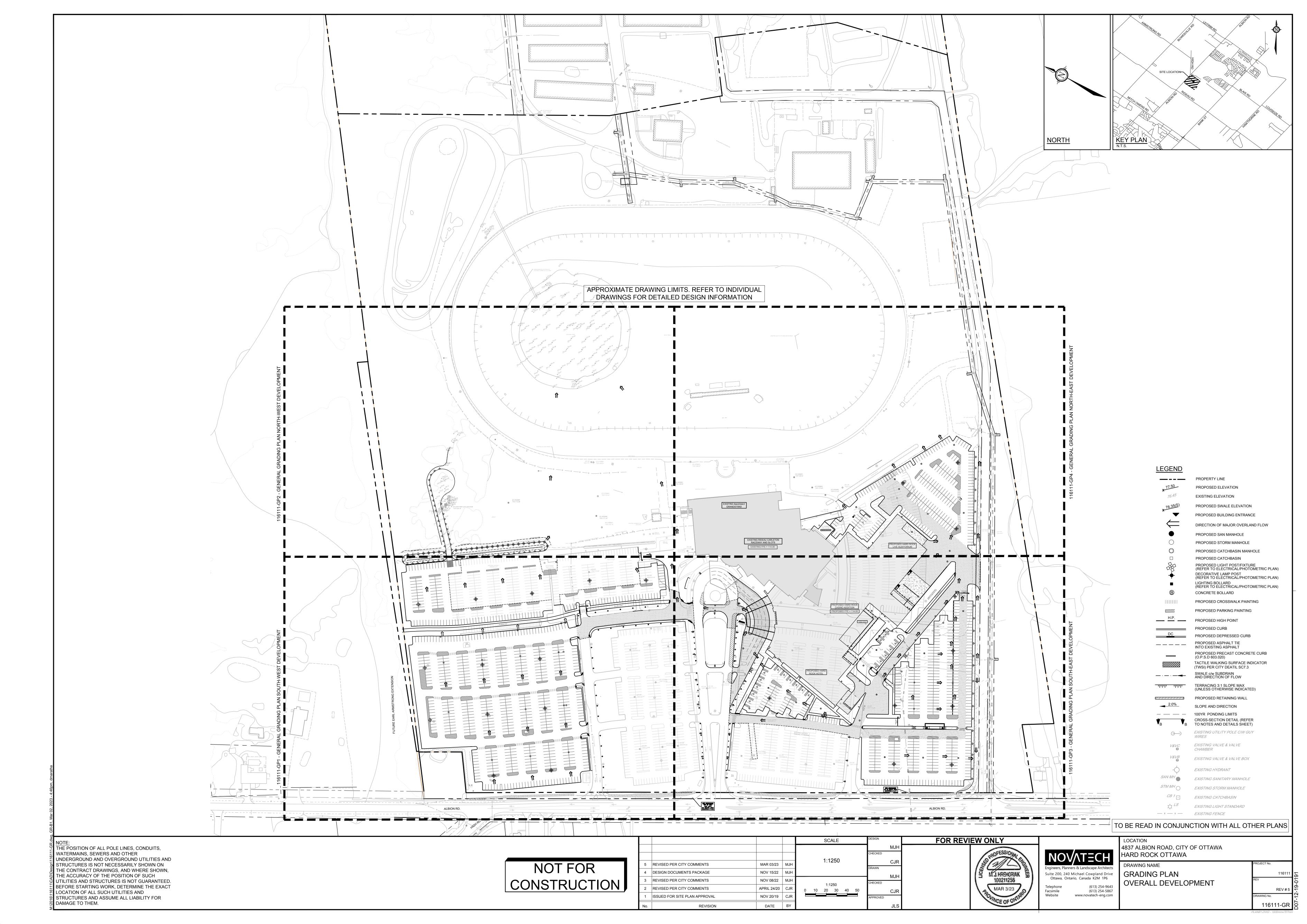






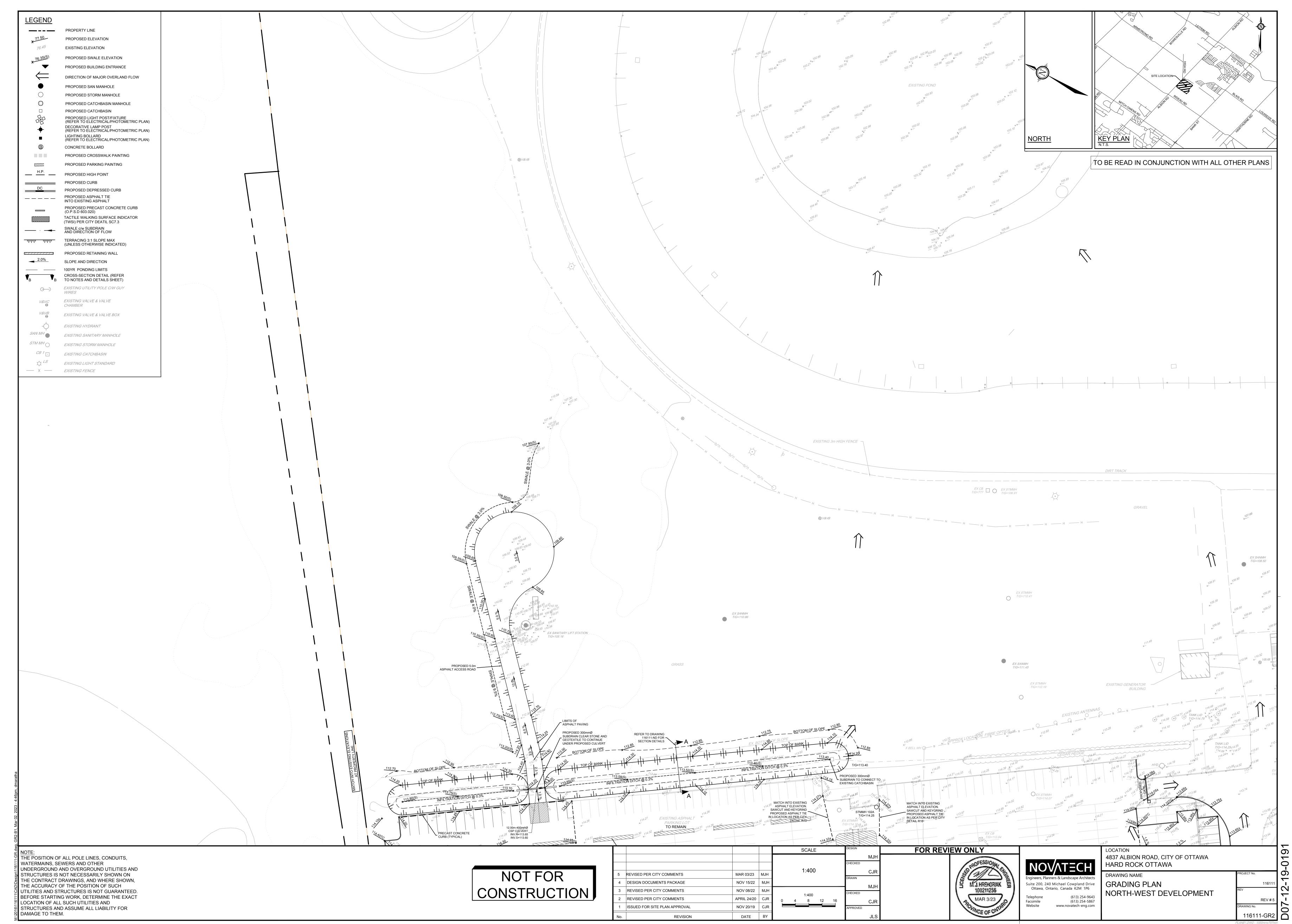




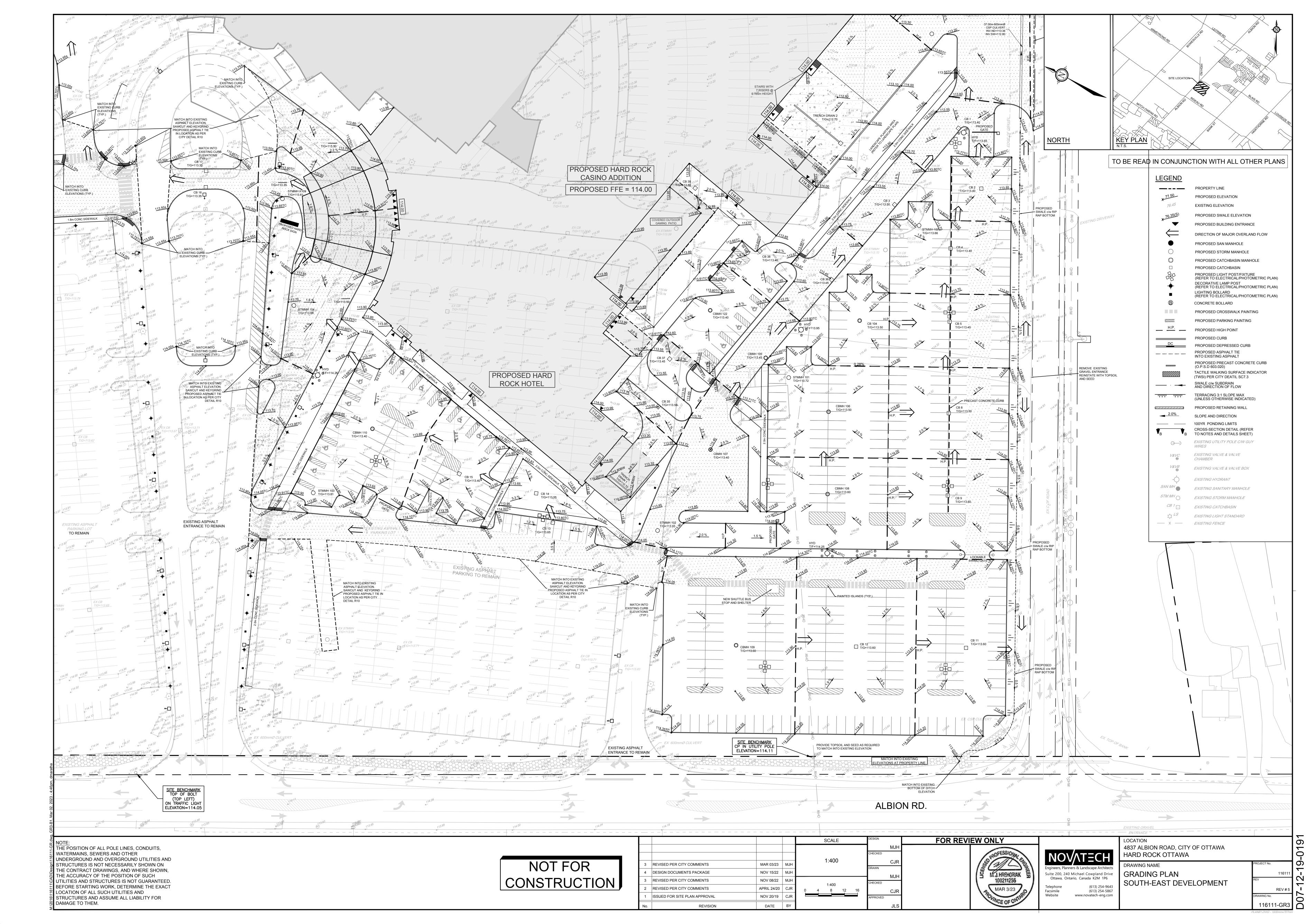


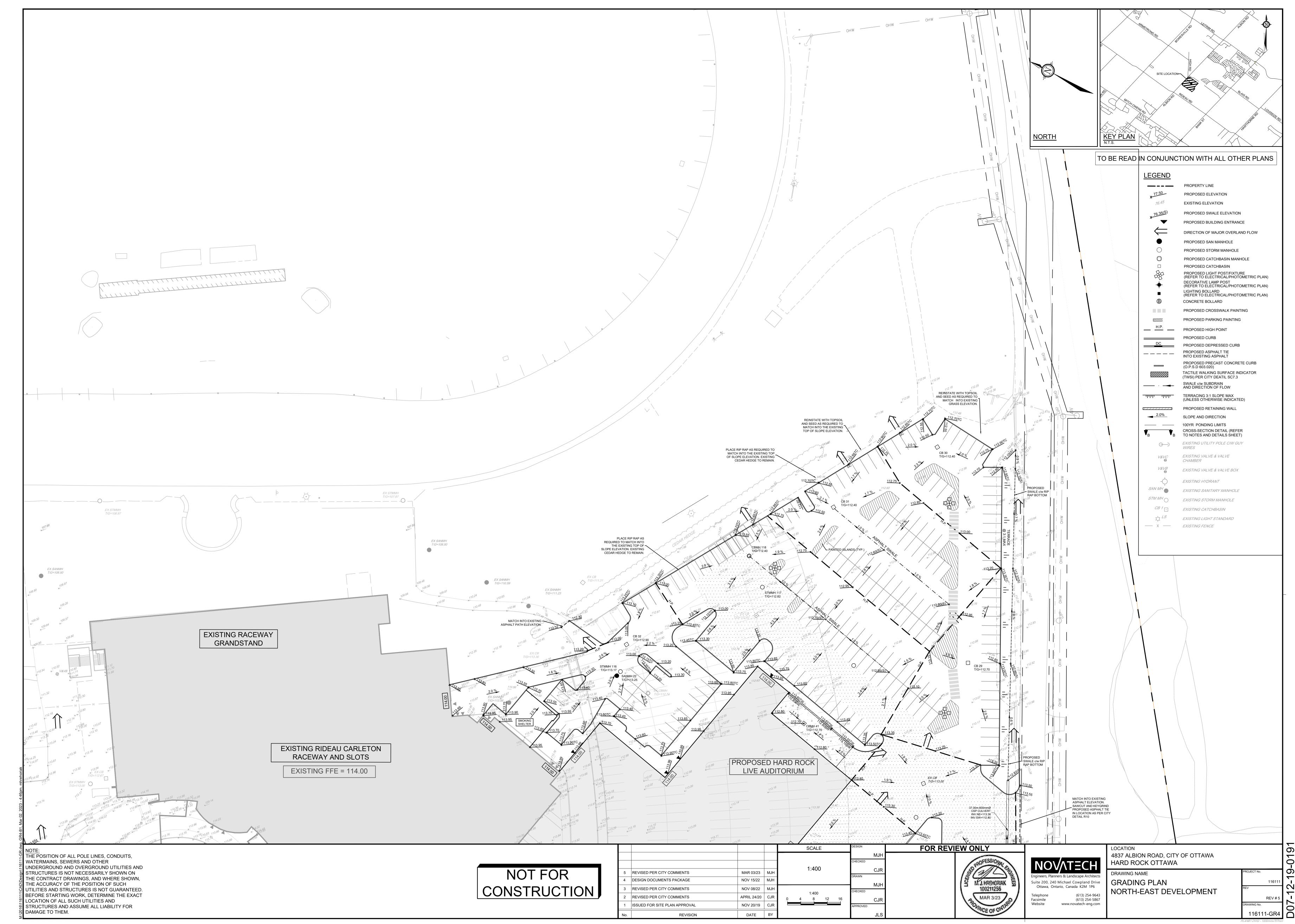


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